

WE CLAIM:

1. A computer-implemented method for comparing an unknown string to a predefined string, the method comprising:

identifying a predefined string;

5 identifying an unknown string for comparison with the predefined string;

performing a bitwise exclusive OR operation on an ASCII binary representation of at least a segment of the unknown string and an ASCII binary representation of at least a segment of the predefined string; and

10 identifying a case-insensitive string match based on the exclusive OR operation.

15 2. The method of claim 1, further comprising identifying a segment of the predefined string and identifying a segment of the unknown string for comparison with the predefined string.

3. The method of claim 2, wherein the segment of the predefined string and the segment of the unknown string contain the same number of characters.

20 4. The method of claim 2, further including left-shifting the binary representation of the segments if the segments contain less than four characters.

5. The method of claim 2, wherein identifying a case-insensitive string match includes identifying a case-insensitive segment match based on the exclusive OR operation.

5 6. The method of claim 5, further comprising performing a bitwise operation with a predefined flag to determine the case-insensitive segment match.

7. The method of claim 6, wherein the predefined flag is 0x20202020.

10 8. The method of claim 5, further comprising identifying a subsequent segment of the predefined string and a subsequent segment of the unknown string for comparison.

15 9. The method of claim 8, wherein the exclusive OR operation yields a result equal to a predefined flag.

10. The method of claim 9, wherein the result is operated on in another bitwise operation.

20 11. The method of claim 9, wherein the predefined flag is zero.

12. The method of claim 9, wherein the predefined flag is 0x20.

13. The method of claim 9, wherein the predefined flag is 0x20202020.

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14. The method of claim 1, wherein each of the segments each include one character.

15. The method of claim 1, wherein each of the segments each include four characters.

16. The method of claim 1, wherein the unknown string includes an HTTP header field.

17. The method of claim 1, wherein the predefined string is from a table of predetermined HTTP header fields.

18. The method of claim 1, wherein identifying a case-insensitive match further includes performing another bitwise operation.

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19. The method of claim 1, further comprising identifying the length of the strings.

20. The method of claim 19, wherein the length of the strings is the same number of characters.

5 21. The method of claim 1, wherein the computer-implemented method is used over a WAN.

22. The method of claim 1, further comprising determining if characters of the strings are within a predefined ASCII range.

23. The method of claim 22, wherein characters not within the predefined ASCII range causes the method to yield a negative string match.

24. A method of case-insensitive string matching for use in a computer network, the method comprising comparing a predefined string to an unknown string by performing at least one bitwise operation on characters of the predefined string and the corresponding characters of the unknown string, and identifying a string match based upon results of the bitwise operation(s), wherein the bitwise operation(s) includes at least one exclusive OR operation.

25. A computer networking device for improving data transfer via a computer network, the device comprising a processor configured to compare a client HTTP header with a known HTTP header by performing a bitwise exclusive OR operation on the binary representations of the headers, wherein an HTTP header match is identified based on the exclusive OR operation.

26. An article of manufacture comprising a storage medium having a plurality of machine-readable instructions, wherein when the instructions are executed by a computing system, the instructions providing for:

identifying a predefined string;

identifying an unknown string for comparison with the predefined string;

performing a bitwise exclusive OR operation on the unknown string and the predefined string; and

identifying a case-insensitive string match based on the exclusive OR operation.